

REMARKS

I. Introduction

Claims 1 and 3 are now pending in the application.

II. Drawings

Replacement drawings are attached herewith. The draining oil passage is now labeled in both Figure 1 and Figure 2; no new matter has been added.

III. Interview

Applicants thank the Examiner for taking the time to conduct the telephone interview of March 23, 2009 regarding the final Office Action.

IV. Prior Art Rejection

Currently, claims 1 and 3 stand rejected under 35 U.S.C. § 102(b) as being unpatentable over Houtz (US 3,614,998).

Claim 1 is patentable over Houtz for the following reasons. Claim 1 requires a control device for an input clutch of a work vehicle comprising, in part, an input clutch which is disposed between the engine and a transmission on a power transmission path of the traveling power train of the engine; a brake means for decelerating the work vehicle; a brake control valve which operates to increase a braking force of the brake means depending on a valve position; a brake operation means which is disposed to operate the brake control valve; a draining oil passage which is an oil passage branched from an oil passage for supplying a pressure oil to the input clutch and communicated with a tank; and a pressure reducing valve which is disposed in

the draining oil passage and operates to increase the pressure oil flowing through the draining oil passage according to a valve position and to decrease a clutch pressure of the input clutch, wherein: the brake operation means is mechanically coupled with the pressure reducing valve, and the pressure reducing valve is mechanically coupled with the brake control valve through a spring, one end of the spring being connected to the pressure reducing valve, and the other end of the spring being connected to the brake control valve.

Houtz discloses a combined clutch and brake control system comprising an arm (34) which is linked to a clutch control valve (38) and a brake control valve (32). As discussed in the interview of March 23, 2009, the arm (34) of Houtz does not constitute a spring. No passage could be found in Houtz suggesting that the arm (34) has any appreciable elasticity. The MPEP provides that in determining patentability the “broadest reasonable interpretation” standard should be applied to claim language. MPEP 2111 (emphasis added.) Applicants submit that a claim interpretation by which any physical object can be considered a “spring” because all materials have some resiliency is not within the broadest reasonable interpretation of the term “spring.” Notably, this interpretation is so broad that the term “spring” is rendered meaningless; a cinderblock or a glass bottle could be called a “spring.” Because Houtz fails to disclose a pressure reducing valve mechanically coupled with the brake control valve through a spring, Houtz cannot meet the requirements of claim 1.

The control system of Houtz also includes a conduit (68) provided at one outlet of clutch control valve (38) which directs the flow of oil back to reservoir (66) such that the clutch is maintained in a disengaged position. By contrast, the present invention utilizes a pressure reducing valve which is disposed *in* a draining oil passage. Figure 1 of Houtz depicts the draining oil passage 68 beginning with an outlet of valve (38); the valve is not disposed in the oil

passage. Because Houtz fails to disclose the pressure reducing valve disposed in the draining oil passage, Houtz cannot meet the requirements of claim 1.

Independent claim 3, like claim 1, also requires “a pressure reducing valve which is disposed in the draining oil passage.” Claim 3 is thus patentable for at least the reasons set forth above regarding this requirement.

The configuration of the present invention has significant advantages over the prior art. The brake operation device of the present application is capable of decreasing the clutch pressure while the brake force is increased and increasing the clutch pressure while the brake force is decreased. This functionality is depicted in Figure 3 of the present application in which clutch pressure and brake pressure intersect at a non-zero number; by contrast, the configuration of Houtz cannot increase clutch pressure while brake force is decreased, as seen in Figure 2 of Houtz. Moreover, because the pressure reducing valve of the present invention is “*disposed in the draining oil passage*,” as required by claims 1 and 3, the pump for supplying oil to the clutch is always in fluid communication with the clutch. By contrast, as seen in Figure 1 of Houtz, control valve (38) completely disconnects the oil line flowing to clutch (18).

It is thus submitted that the invention of the present application, as defined in claims 1 and 3 is not anticipated nor rendered obvious by the prior art, and yields significant advantages over the prior art. Allowance is respectfully requested.

In view of the foregoing amendments and remarks, inasmuch as all of the outstanding issues have been addressed, Applicants respectfully submit that the present application is in complete condition for issuance of a formal Notice of Allowance, and action to such effect is earnestly solicited.

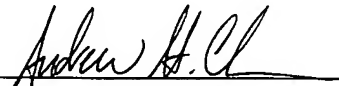
Should any issues remain after consideration of the within response, however, the

Examiner is invited to telephone the undersigned at the Examiner's convenience.

If any fee beyond that submitted herewith, or extension of time is required to obtain entry of this Amendment, the undersigned hereby petitions the Commissioner to grant any necessary time extension and authorizes charging Deposit Account 23-0975 for any such fee not submitted herewith.

Respectfully submitted,

Yoshiharu SATO et al.

By: 
Andrew D. St. Clair
Registration No. 58,739
Attorney for Applicants

ADS/DMO/rgf
Washington, D.C. 20005-1503
Telephone (202) 721-8200
Facsimile (202) 721-8250
March 31, 2009